

REMARKS

Claims 19 - 37 are pending. Claim 19 has been amended. Claims 34 - 37 have been added. No new matter has been introduced.

In the August 23, 2004 Office Action, the Examiner objected to the specification for informalities. Applicants have amended the specification to address this objection and respectfully submit that this objection be withdrawn.

The Examiner objected to claim 19 for an informality. Applicants have amended claim 19 to correct the informality and respectfully submit that the objection to claim 19 be withdrawn.

The Examiner rejected claims 19 - 22, 25, 26, and 31 - 33 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Published Patent Application No. 2003/0104178 to Petersen et al. ("the Petersen reference") in view of U.S. Patent No. 6,452,200 to Kotler ("the Kotler reference"). The Examiner rejected claims 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the Peterson reference in view of the Kotler reference and further in view of U.S. Patent No. 3,604,394 to Ohno et al. ("the Ohno reference"). The Examiner rejected claim 27 under 35 U.S.C. § 103(a) as being unpatentable over the Petersen reference in view of the Kotler reference and further in view of U.S. Patent No. 5,985,425 to Tomizawa et al. ("the Tomizawa reference"). The Examiner rejected claims 29 and 30 under 35 U.S.C. § 103(a) as being unpatentable over the Petersen reference in view of the Kotler reference and further in view of U.S. Patent 6,086,942 to Carden, Jr. et al. ("the Carden reference"). These rejections are traversed in so far as they apply to said pending claims.

Independent claim 19, as amended, recites:

A method of making a radiation source, said method comprising:
positioning a substrate relative to a liquid deposition head, said liquid deposition head having an opening through which a deposited solution may be deposited onto a portion of a front surface of said substrate;
depositing said deposited solution onto said front surface to form a specified radioactive deposit;
removing a solvent from said deposited solution;
fixing the position of said radioactive deposit on said front surface;
opening an outer housing having a fastener; and
placing said substrate within said outer housing, **said outer housing having a radiotranslucent top to allow radiation from said radioactive deposit to pass through the outer housing.**

The Examiner states that the Petersen reference fails to teach that the coated substance is placed into an outer housing by opening the outer housing having a fastener and placing the substrate within said outer housing. The applicants agree with the Examiner and respectfully submit that claim 19, as amended, distinguishes over the Petersen reference.

The Kotler reference does not make up for the deficiencies of the Petersen reference. The Examiner states that the Kotler reference discloses that containers for housing a source of radiation are conventionally formed of thick walls made of a shielding material, wherein access to the interior of the container employs the use of a tightly fitting removable closure such as lids of different diameters. Thus, the Examiner states that the secondary reference of Kotler is relied upon to show that placing a source of radioactive material into a housing by opening the housing having a fastener is known in the art. (*Office Action, page 3*).

Because the Kotler reference discloses that containers are formed of thick walls made of a shielding material, the Kotler reference cannot disclose an outer housing

wherein **said outer housing having a radiotranslucent top to allow radiation from said radioactive deposit to pass through the outer housing.** The Kotler reference is directed to a device that attenuates leakage of ionizing radiation from the radioactive source located therein. In other words, the Kotler reference housing does not allow radiation from the radioactive deposit to pass through an outer housing, as is recited in claim 19. Instead, the Kotler reference housing prevents radiation from escaping the housing. The Kotler housing is at least radiopaque and is not radiotranslucent. Accordingly, applicants respectfully submit that claim 19, as amended, distinguishes over the Kotler reference, alone or in combination with the Petersen reference.

The Ohno, Tomizawa, and Carden reference do not make up for the deficiencies of the Petersen / Kotler reference combination. The Examiner states that the Ohno reference discloses a web substrate that is to be coated on one side can be moved along using a roller, which is only in contact with a back surface of the substrate. (*Office Action, page 4*). The Examiner states that the Tomizawa reference discloses that conventional ink includes a binding agent. (*Office Action, page 5*). The Examiner states that the Carden reference discloses that a precursor material can be activated by subsequent bombardment with appropriate nuclear particles that can be used instead of radioactive material. (*Office Action, page 5*). Assuming, *arguendo*, that the Ohno, Tomizawa, and Carden references disclose all that the Examiner states that they do, these references do not disclose a method of making a radioactive source, the method including placing a substrate with a radioactive deposit within said outer housing, **said outer housing having a radiotranslucent top to allow radiation from said radioactive deposit to pass through the outer housing.** Accordingly, applicants

respectfully submit that claim 19, as amended, distinguishes over the Ohno / Tomizawa / Carden / Petersen / Kotler reference combination.

Claims 20 - 36 depend, directly or indirectly, on claim 19, as amended.

According, applicants respectfully submit that claims 20 - 36 distinguish over the Petersen / Kotler / Ohno / Tomizawa / Carden reference combination, for the same reasons as discussed above in regard to independent claim 19, as amended.

Claims 34 and 35 further distinguish over the cited references. Claim 34 recites:

The method according to claim 19, wherein the outer housing further includes a border, the border being radiopaque to minimize the transmission of radiation from said radioactive deposit.

Claim 35 recites:

The method according to claim 34, wherein the border on the outer housing further includes handles to allow easily handling of the outer housing.

None of the cited references disclose that an outer housing includes a border, where the border is radiopaque and also includes handles. Accordingly, applicants respectfully submit that claims 34 and 35 further distinguish over the Petersen / Kotler / Ohno / Tomizawa / Carden reference combination.

Independent claim 37 distinguishes over the Petersen and Kotler references.

A method of making a radiation source, said method comprising:
positioning a substrate relative to a liquid deposition head, said liquid deposition head having an opening through which a deposited solution may be deposited onto a portion of a front surface of said substrate;

depositing said deposited solution onto said front surface to form a specified radioactive deposit;

removing a solvent from said deposited solution;

fixing the position of said radioactive deposit on said front surface;

opening a outer housing having a fastener; and

placing said substrate within said outer housing, **wherein said substrate includes a radiopaque back surface to minimize radiation from being transmitted through a back surface of the outer housing.**

//

The Petersen reference does not disclose that the substrate, which has a radioactive deposit on a front surface, includes a radiopaque back surface to minimize radiation from being transmitted through a back surface of the outer housing. Accordingly, applicants respectfully submit that claim 37 distinguishes over the Petersen reference.

The Kotler reference does not make up for the deficiencies of the Petersen reference. The Examiner states that the Kotler reference discloses containers for housing a source of radioactive material which are conventionally formed of thick walls of a shielding material. (*Office Action, page 3*). Specifically, the Kotler reference discloses that a variety of removable closures are used in containers for shielding and sealing radioactive material disposed within a central bore of a container. (*Kotler, col. 2, lines 35 - 40*).


This is not the same as a method of making a radiation source including placing a substrate within said outer housing, **wherein said substrate includes a radiopaque back surface to minimize radiation from being transmitted through a back surface of the outer housing.** The Kotler reference is not disclosing that the back surface of the substrate is radiopaque. Instead, the Kotler reference is disclosing that the entire container is shielded. Accordingly, applicants respectfully submit that claim 37 distinguishes over the Kotler reference, alone or in combination with the Petersen reference.

Applicants believe that the claims are in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

PILLSBURY WINTHROP LLP

Date: November 23, 2004

By: 
Mark R. Kendrick
Registration No. 48,468
Attorney For Applicants

725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Telephone: (213) 488-7100
Facsimile: (213) 629-1033